

National Science Olympiad 2009 Trajectory C

Team Number: C__ Team Name: _____

Student Names: _____ Final Score: _____

Do not write below this line.

Construction Violations

- | | | |
|---|---|---|
| 1. Launching force supplied by material other than non-metallic elastic solids | Y | N |
| 2. Device (including weights for stabilizing device) does not fit in 80cm cube | Y | N |
| 3. Team does not trigger the device in the area behind launch area | Y | N |
| 4. Triggering device does not extend out of the launch area | Y | N |
| 5. Radio controlled triggering devices used | Y | N |
| 6. Students are inside the launch area or touch the device while triggering it | Y | N |
| 7. Team does not use an unmodified tennis ball, racquetball, ping-pong ball, or Hackie Sack | Y | N |

Others

- | | | |
|--|---|---|
| 8. Participation Points only (ie. Apparatus is operated in an unsafe manner) | Y | N |
| 9. Disqualified (notify the team and their coach as soon as possible) | Y | N |

Launches

Launch 1 Launch 2

- | | | |
|---|-----------|-----------|
| Close Target Area Score in mm (distance from center of the initial projectile impact location to the center of the target area)
Note: If device fails to launch or projectile misses the target area, score is 800 | 10. _____ | 11. _____ |
|---|-----------|-----------|

- | | | |
|--|-----------|-----------|
| Far Target Area Score in mm (distance from center of the initial projectile impact location to the center of the target area even if projectile misses the target area)
Note: If device failed to launch, then the score is the distance from the front of the launch area to the center of far target in mm) | 12. _____ | 13. _____ |
|--|-----------|-----------|

- | | |
|--|-------|
| 14. Distance from the front of the launch area to the center of far target in mm | _____ |
|--|-------|

Penalties – Total number of time during the entire 10 minutes

- | | |
|---|-------|
| 15. Participant does not wear the safety spectacle/goggles correctly | _____ |
| 16. Participant is in the launch area or in front of the line that marks the front edge of the launch area when a launch occurs | _____ |
| 17. Participant does not give a warning prior to a launch or unintended launch | _____ |
| 18. Any part of a team's device is outside the 1m x 1.5m launch area prior to or after a launch | _____ |

Graph Score Deduction

Graph 1

Graph 2

Completed data table (20 pts max)

19. _____ **23.** _____

Graphs (20 pts max)

20. _____ **24.** _____

Graph matches data table and both are on the same page (20 pts max)

21. _____ **25.** _____

Graph properly labeled (title, team name, x y axis variables, increments with units) (40 pts max)

22. _____ **26.** _____

Graph 3

Graph 4

Completed data table (20 pts max)

27. _____ **31.** _____

Graphs (20 pts max)

28. _____ **32.** _____

Graph matches data table and both are on the same page (20 pts max)

29. _____ **33.** _____

Graph properly labeled (title, team name, x y axis variables, increments with units) (40 pts max)

30. _____ **34.** _____